



**CITY OF NOVI CITY COUNCIL
DECEMBER 21, 2020**

SUBJECT: Approval to award engineering design services to Spalding DeDecker for replacement of the force main from the Hilton Sanitary Pump Station project in the amount of \$24,320.00.

SUBMITTING DEPARTMENT: Department of Public Works, Engineering Division

EXPENDITURE REQUIRED	\$ 24,320.00
AMOUNT BUDGETED	\$ 24,320.00
APPROPRIATION REQUIRED	\$ 0
LINE ITEM NUMBER	592-592.00-976.072

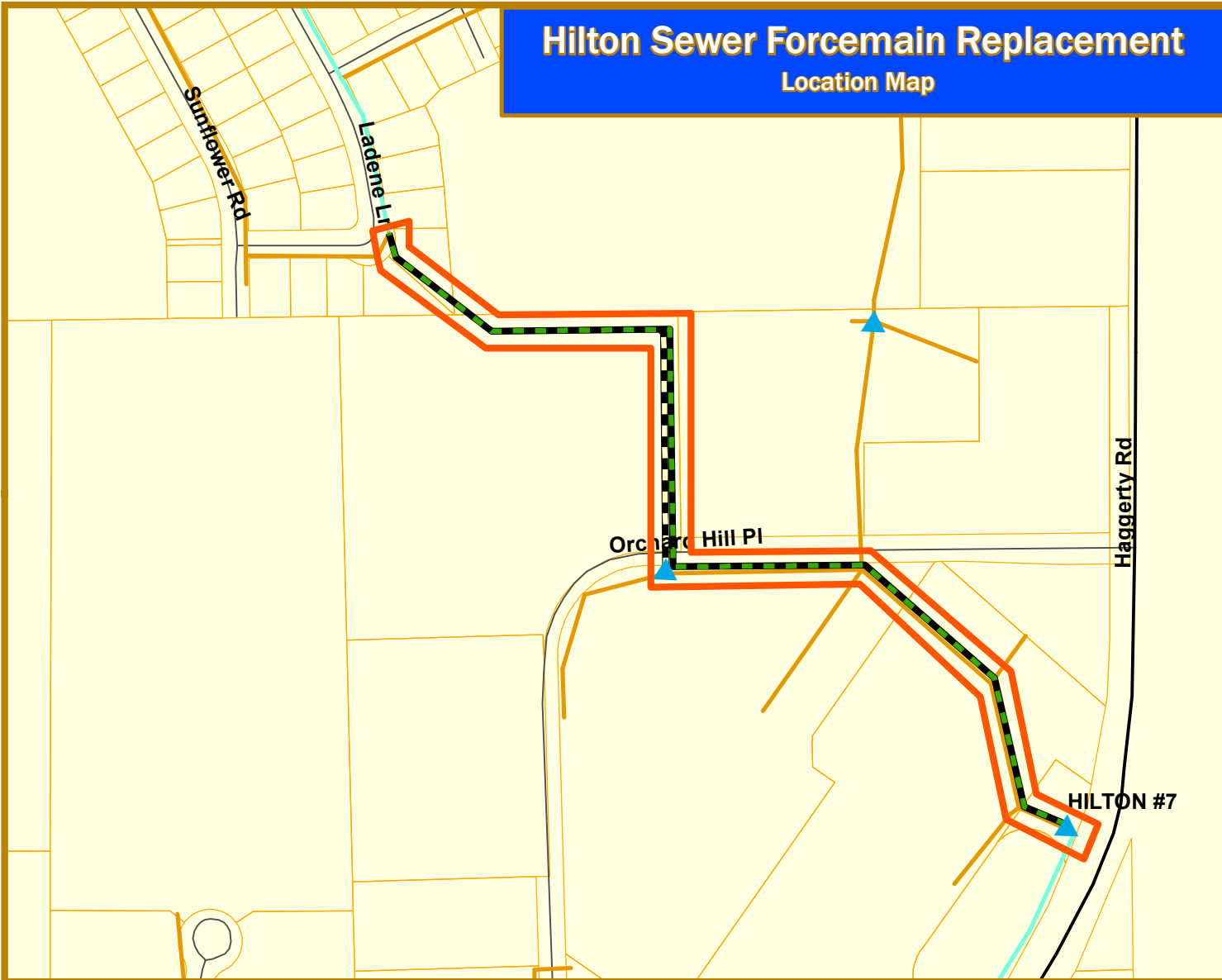
BACKGROUND INFORMATION: This project involves the installation of a new parallel force main downstream of the Hilton Pump Station. The existing force main is 38 years old, and constructed of ductile iron, which makes it prone to failure. If this force main were to fail, the station's flows would begin to back up into nearby basements, and eventually overflow into adjacent water bodies. The addition of a parallel force main (~2,700 feet in length) is being proposed, while leaving the existing ductile iron force main in place as a redundant backup should the new force main ever be damaged or need repair.

The attached design engineering services proposal outlines the scope of services in more detail. The design fee for this project will be \$24,320.00 (9.5% of the estimated construction cost of \$256,000). Spalding DeDecker's engineering fees are based on the fixed fee schedule established in the Agreement for Professional Engineering Services for Public Projects.

Design of this project would begin following award with construction expected to start in July 2021.

RECOMMENDED ACTION: Approval to award engineering design services to Spalding DeDecker for the replacement of the force main from the Hilton Sanitary Pump Station project in the amount of \$24,320.00.

Hilton Sewer Forcemain Replacement Location Map









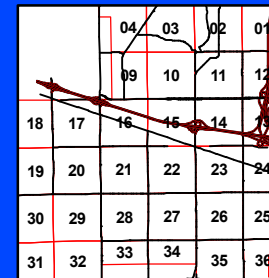
Map Author: Rebecca Runkel
Date: 12/4/2020
Project: Hilton Forcemain
Version #: 1.0

MAP INTERPRETATION NOTICE

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.

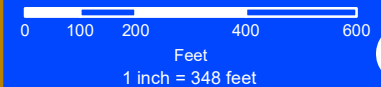
Map Legend

-  Sanitary Lift Station
-  2"
-  8"
-  8"
-  10"
-  Other



City of Novi

Engineering Division
Department of Public Works
26300 Lee BeGole Drive
Novi, MI 48375
cityofnovi.org



November 17, 2020

Ben Croy, PE
City Engineer
City of Novi
26300 Lee BeGole Drive
Novi, Michigan 48375

**Re: Hilton Sewer Forcemain Replacement
Proposal for Civil Engineering Services**

Dear Mr. Croy:

Spalding DeDecker (SD) is pleased to provide the following proposal for engineering design services to replace and upsize the existing Hilton Sanitary forcemain.

Project Understanding

SD understands that the current forcemain from the Hilton Sanitary Pump Station is undersized or in need of replacement. SD will compare the current pumps in the pump station against the existing forcemain and compare the change in capacity with various sizes of larger force mains. Depending on direction from the City of Novi additional pumps may be looked and evaluated for a future condition state. SD will also utilize the capacity study we recently completed along with reviewing the existing sanitary sewer study completed by OHM in 2014. Using this information we will calculate the required pumping capacity of the Hilton Pump Station's current and future state to ensure proper capacity for years to come and an easy transition to new pumps when they are needed. In initial meetings with the City of Novi it was brought to our attention that there may be some odor and hydrogen sulfide (H₂S) issues with this system. In this current scope our intent is to properly size the new forcemain and include manhole lining in the discharge manhole. A scope of service that may be beneficial to the City of Novi would be adding a small odor control system at the Hilton Pump Station. This scope is listed as an additional service to the base design.

Proposed Scope of Services

SD's scope will include:

- Prepare a topographic survey of the Hilton Pump Station and force main corridor to obtain all surface features and elevations.
- Review current documentation and as built drawings for the pump station and force main.
- Prepare preliminary layout and cost estimate for review.
- Prepare MDEQ permit applications for submittal.
- Prepare 90% plans and specifications for final review.
- Prepare complete set of bid documents including plans and specifications.
- SD will assist the City during the bidding process as needed.

Construction Cost Estimate and Proposed Fees



Based on our pre-qualification status with the City, engineering design fees are typically based on a pre-determined percentage of the pre-design construction cost estimate. A preliminary cost estimate for the project has been generated with an estimated cost of \$256,000. As an additional optional service, an odor control system could be added to this scope of services for an estimated construction cost of \$10,000. Based on this estimated cost, the fee for this project will be:

Design Phase Services (9.50% of estimated cost) -	\$24,320.00
Odor control system at Hilton Pump Station (OPTIONAL)	\$950.00

Project Schedule

The following summarizes the anticipated schedule for the project:

<u>Milestone</u>	<u>Completed By</u>
Design Project Award	11/20/2020
Initial Meetings and Site Visits	12/10/2020
Survey Field Work	11/30-12/18/2020
30% Preliminary Plans	2/12/2021
MDEQ Permit Submittals	2/26/2021
90% Final Plans	4/2/2021
100% Bid Package & Advertising	4/30/2021
Bid Opening	5/9/2021
Award by Council	6/8/2021*
Construction Start	7/19/2021*
Construction Completion	12/3/2021*

*Dates shown are earliest possible, we understand the City may not fund for construction until 2022. Thank you for the opportunity to provide this proposal for Engineering Services. Please don't hesitate to contact me if you have any questions or comments regarding this submittal.

SPALDING DEDECKER ASSOCIATES, INC.

Jeremy Schrot, PE
Director of Public Engineering

OPINION OF PROBABLE CONSTRUCTION COST

PROJECT NAME: HILTON FORCE MAIN

PROJECT NO: NV18-008

CLIENT NAME: CITY OF NOVI

PREPARED BY: NYS

DATE: 9/6/2018

UPDATED BY: AJF

DATE: 11/17/2020

NO.	ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
1	Bonds, Insurance and Mobilization (10% Max)	1	LS	\$ 23,300.00	\$ 23,300.00
2	Pre-Construction Audio-Visual	1	LS	\$ 1,500.00	\$ 1,500.00
3	Soil Erosion Control Measures	1	LS	\$ 3,500.00	\$ 3,500.00
4	Temporary Traffic Control Devices	1	LS	\$ 5,000.00	\$ 5,000.00
5	10" HDPE DIPS SDR-11 Force Main	2,730	LF	\$ 70.00	\$ 191,100.00
6	Bypass Manhole, Complete	1	EA	\$ 10,000.00	\$ 10,000.00
7	Connection to Existing Force Main	1	EA	\$ 6,000.00	\$ 6,000.00
8	HMA Surface, Rem	80	SY	\$ 20.00	\$ 1,600.00
9	HMA, 36A	20	TON	\$ 100.00	\$ 2,000.00
10	Landscaping/Restoration	1	LS	\$ 12,000.00	\$ 12,000.00
OPINION OF PROBABLE CONSTRUCTION COST:					\$ 256,000.00
ENGINEERING FEES (9.5%):					\$ 24,320.00
DESIGN CONTINGENCY (20%):					\$ 4,864.00
CONSTRUCTION ADMINISTRATION (6.75%):					\$ 17,280.00
Crew Days: 20 DAYS @ \$ 700.00					\$ 14,000.00
CONSTRUCTION MATERIAL TESTING (2.5%):					\$ 6,400.00
CONSTRUCTION CONTINGENCY (10%):					\$ 29,368.00
Total Estimated Cost:					\$ 352,232.00
11	Odor Control System	1	LS	\$ 10,000.00	\$ 10,000.00
OPINION OF PROBABLE CONSTRUCTION COST:					\$ 10,000.00
ENGINEERING FEES (9.5%):					\$ 950.00
DESIGN CONTINGENCY (20%):					\$ 190.00
CONSTRUCTION ADMINISTRATION (6.75%):					\$ 675.00
Crew Days: 2 DAYS @ \$ 700.00					\$ 1,400.00
CONSTRUCTION MATERIAL TESTING (2.5%):					\$ 250.00
CONSTRUCTION CONTINGENCY (10%):					\$ 1,233.00
Total Estimated Cost:					\$ 14,698.00

In providing opinions of probable construction cost, the Client understands that the Consultant has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing, and that the Consultant's opinions of probable construction costs are made on the basis of the Consultant's professional judgement and experience. The Consultant makes no warranty, express or implied, that the bids or the negotiated cost of the Work will not vary from the Consultant's opinion of probable construction cost.

NOTES: Installation of new force main.